Darryl Hannan

PhD Candidate

hannandarryl.github.io San Antonio, TX

Education

Doctor of Philosophy — *Drexel University*
Computer Science — *June 2022 – Present*
Member of SPARSE Coding Lab, advised by Professor Edward Kim

Master of Science — *University of North Carolina at Chapel Hill*
Computer Science — *August 2018 – May 2021*
Member of MURGe-Lab, advised by Professor Mohit Bansal

Bachelor of Science — *Villanova University*
Computer Science — *August 2014 – May 2018*
Major: Computer Science
Concentration: Cognitive Science
GPA: 3.77

Research Experience

Pacific Northwest National Laboratory — *July 2023 – Present*
PhD Intern — *Seattle, Washington (Remote)*
Research in the areas of computer vision and machine learning as part of National Security Internship Program.

Drexel University — *June 2022 – Present*
NSF Fellow — *Philadelphia, Pennsylvania (Remote)*
Conducted research focused on biologically-inspired learning techniques, event-based video processing, and neuromorphic computing.

Drexel University — *September 2021 – June 2022*
Artificial Intelligence Engineer — *Philadelphia, Pennsylvania (Remote)*
Implemented and applied biologically-inspired learning techniques to a pneumothorax classification task.

University of North Carolina at Chapel Hill — *August 2018 – August 2021*
Research Assistant/NSF Fellow — *Chapel Hill, North Carolina*
Conducted research spanning a variety of subfields in NLP, with an emphasis on multimodal processing.

Tencent America — *Summer 2020*
NLP Research Intern — *Bellevue, Washington (Remote)*
Conducted research on improving transformer-based conversational QA models via dialogue generation techniques.

Los Alamos National Laboratory — *Summer 2018*
Applied Machine Learning Fellow — *Los Alamos, New Mexico*
Applied biologically-inspired sparse-coding model to language, attempting to exploit top-down feedback to influence sentence-level representations.

Los Alamos National Laboratory — *Summer 2017*
Student Research Scientist — *Los Alamos, New Mexico*
Developed a multimodal deep sparse coding model using biologically-inspired learning techniques.

Publications

Interpretable Models for Detecting and Monitoring Elevated Intracranial Pressure (ISBI 2024)
Darryl Hannan, Steven C. Nesbit, Ximing Wen, Glen Smith, Qiao Zhang, Alberto Goffi, Vincent Chan, Michael J. Morris, John C. Hunninghake, Nicholas E. Villalobos, Edward Kim, Rosina O. Weber, and Christopher J. MacLellan

Event-to-Video Conversion for Overhead Object Detection (SSIAI 2024)
Darryl Hannan, Ragib Arnab, Gavin Parpart, Garrett T. Kenyon, Edward Kim, and Yijing Watkins

MobilePTX: Sparse Coding for Pneumothorax Detection Given Limited Training Examples (IAAI 2023)
Darryl Hannan, Steven C. Nesbit, Ximing Wen, Glen Smith, Qiao Zhang, Alberto Goffi, Vincent Chan, Michael J. Morris, John C. Hunninghake, Nicholas E. Villalobos, Edward Kim, Rosina O. Weber, and Christopher J. MacLellan

StoryDALL-E: Adapting Pretrained Text-to-Image Transformers for Story Continuation (ECCV 2022)
Adyasha Maharana, **Darryl Hannan**, and Mohit Bansal

RESIN-11: Schema-guided Event Prediction for 11 Newsworthy Scenarios (NAACL 2022)
Xinya Du, Zixuan Zhang, Sha Li, Pengfei Yu, Hongwei Wang, Tuan Lai, Xudong Lin, Ziqi Wang, Iris Liu, Ben Zhou, Haoyang Wen, Manling Li, **Darryl Hannan**, Jie Lei, Hyounghun Kim, Rotem Dror, Haoyu Wang, Michael Regan, Qi Zeng, Qing Lyu, Charles Yu, Carl Edwards, Xiaomeng Jin, Yizhu Jiao, Ghazaleh Kazeminejad, Zhenhailong Wang, Chris Callison-Burch, Mohit Bansal, Carl Vondrick, Jiawei Han, Dan Roth, Shih-Fu Chang, Martha Palmer, and Heng Ji

Improving Generation and Evaluation of Visual Stories via Semantic Consistency (NAACL 2021)
Adyasha Maharana, **Darryl Hannan**, and Mohit Bansal

ManyModalQA: Modality Disambiguation and QA over Diverse Inputs (AAAI 2020)
Darryl Hannan, Akshay Jain, and Mohit Bansal

Deep Sparse Coding for Invariant Halle Berry Neurons (CVPR 2018)
Edward Kim, **Darryl Hannan**, and Garrett Kenyon

Posters

Emojis and Weather (CCSCNE 2018)

Awards

National Science Foundation GRFP Fellowship (15% acceptance)	2019
Applied Machine Learning Summer Research Fellowship (10% acceptance)	2018
Villanova Center for Research and Fellowships Research and Travel Grant	2017